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**Fan et al.**

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(54) **METHOD FOR MAKING NANOMATERIALS**

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- (75) Inventors: **Hongyou Fan**, Albuquerque, NM (US);  
**Huimeng Wu**, Albuquerque, NM (US)
- (73) Assignee: **Sandia Corporation**, Albuquerque, NM (US)
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- (52) **U.S. Cl.**  
USPC ..... **427/241**; 427/240; 427/369
- (58) **Field of Classification Search**  
USPC ..... 427/240, 241, 369, 355  
See application file for complete search history.

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*Primary Examiner* — Kirsten Jolley

(74) *Attorney, Agent, or Firm* — Kevin W. Bieg; Elmer A. Klauetter

(57) **ABSTRACT**

A method of making a nanostructure by preparing a face centered cubic-ordered metal nanoparticle film from metal nanoparticles, such as gold and silver nanoparticles, exerting a hydrostatic pressure upon the film at pressures of several gigapascals, followed by applying a non-hydrostatic stress perpendicularly at a pressure greater than approximately 10 GPa to form an array of nanowires with individual nanowires having a relatively uniform length, average diameter and density.

**13 Claims, 8 Drawing Sheets**

